

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A computer program product tangibly embodied in a storage medium ~~an information-carrier~~, the computer program product including instructions that when executed generate a graphical user interface on a display device for using a computer to display and modify a data analysis process, the graphical user interface comprising:

a process list display configured to ~~[[for]]~~:

~~displaying~~ display identifications of data analysis processes, and

~~receiving receive user input selecting~~ an entry of an identification of a data analysis process; and

a data analysis display configured to ~~[[for]]~~:

~~displaying a representation of each sub-process~~ display representations of sub-processes included in the data analysis process identified by the ~~received~~ selected entry, the displayed representations of sub-processes including:

a representation of a data mining sub-process for creating a data attribute by performing an analytical process on data from an analytical processing data source,

a representation of at least one of (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming the extracted data from a data format used by the first transactional data source to a data format used for analytical processing, and (3) a loading sub-process for loading data into the analytical processing data source, and

a representation of a deployment sub-process for storing the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing, and  
displaying a connection display connections between each displayed sub-process the displayed sub-processes, the connections indicating a sequence with which the displayed sub-processes are performed when performing the data analysis process;  
wherein the data analysis display is operable to display:  
a data mining sub-process for creating a data attribute by performing an analytical process on data from an analytical processing data source; and  
one or more of sub-processes of (1) an extraction sub-process for extracting data from a data source, (2) a transformation sub-process for transforming the extracted data from a data format used by the data source to a data format used for analytical processing, (3) a loading sub-process for loading data into the data source used for analytical processing, and (4) a deployment sub-process for storing the created data attribute.

2. (Cancelled)

3. (Original) The computer program product of claim 1 wherein each type of the sub-processes displayed in the data analysis process display is represented by a different shape than shapes representing other types of sub-processes displayed in the analysis sub-process display.

4. (Currently Amended) The computer program product of claim 1 wherein the graphical user interface further comprises controls ~~for adding~~ configured to add types of sub-processes to the data analysis process displayed in the data analysis display.

5. (Currently Amended) The computer program product of claim 4 wherein the controls comprise one or more of a control ~~for adding configured to add~~ an extraction sub-process, a control ~~for adding configured to add~~ a load sub-process, a control ~~for adding configured to add~~ an analysis sub-process, and a control ~~for adding configured to add~~ a deployment sub-process.

6. (Currently Amended) The computer program product of claim 1 wherein the graphical user interface further comprises a control ~~for displaying configured to display~~ information about status of the data analysis process.

7. (Currently Amended) A computer program product tangibly embodied in a storage medium ~~an information carrier~~, the computer program product including instructions that when executed generate a graphical user interface on a display device for using a computer to define a data analysis process, the graphical user interface comprising:

a sub-processes display configured to ~~[[for]]~~:

~~receiving~~ receive user input indicating an entry of an identification ~~of which of~~ sub-processes at least one of (1) an extraction sub-process for extracting data from a data source, (2) a transformation sub-process for transforming the extracted data from a data format used by the data source to a data format used for analytical processing, (3) a loading sub-process for loading data into a data source that is used for analytical processing, (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and (5) ~~[[an]]~~ a deployment sub-process for storing a data attribute created in another sub-process the created data attribute, and

~~receiving~~ receive user input indicating an entry identifying a computer program to be associated with each of the identified sub-processes such that ~~[[the]]~~ execution of the computer program causes the identified sub-process to be performed; and

a common data display ~~for receiving~~ configured to receive user input indicating an entry of selected meta-data elements to be used in the data analysis process wherein each meta-data element is associated with a corresponding data element in the data source and with a corresponding data element in the analytical processing data source.

8. (Original) The computer program product of claim 7 wherein:  
the data source is a transactional data source, and  
the deployment sub-process stores the created data attribute in the transactional data source.

9. (Original) The computer program product of claim 8 wherein the deployment sub-process stores the created data attribute in one of the data source, a second transactional data store other than the transactional data source, or a second analytical data store other than the analytical data used for the data mining sub-process.

10. (Currently Amended) The computer program product of claim 7 wherein ~~the~~ graphical user interface is ~~operable~~ configured to receive ~~[[an]]~~ user input defining how a particular error is to be processed during the data analysis process.

11. (Currently Amended) The computer program product of claim 7 wherein the graphical user interface is ~~operable~~ configured to receive ~~[[an]]~~ user input identifying a computing device or a component of a computing device to be used during the execution of one of the identified sub-processes.

12. (Currently Amended) The computer program product of claim 7 wherein the graphical user interface is ~~operable~~ configured to receive ~~[[an]]~~ user input identifying an order in which each of the identified sub-processes are to be performed when performing the data analysis process.

13. (Currently Amended) The computer program product of claim 7 wherein the graphical user interface is ~~operable~~ configured to receive ~~[[an]]~~ user input identifying when the data analysis process is to be initiated.

14. (Currently Amended) A computer-implemented method for receiving information from a user for use in a data analysis process, the method comprising:  
receiving ~~[[an]]~~ user input identifying a data analysis process;  
receiving multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process, wherein:  
at least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical processing data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and  
at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes; and  
storing the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process, wherein  
the deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing.

15-16. (Cancelled)

17. (Currently Amended) The method of claim 14 wherein one of the sub-process user inputs comprises a sub-process user input identifying a computer program that causes the identified sub-process to be performed.

18. (Currently Amended) The method of claim 14 further comprising receiving user inputs of meta-data elements to be used in the data analysis process wherein each meta-data element is associated with 1) a corresponding data element in the first transactional data source, 2) a corresponding data element in the analytical ~~process~~ processing data source, or 3) both a corresponding data element in one of the first and second transactional data sources and a corresponding data element in the analytical ~~process~~ processing data source.

19. (Original) The method of claim 14 wherein each of the multiple sub-processes use a common message format.

20. (Currently Amended) The method of claim 14 further comprising receiving [[an]] user input defining how a particular error is to be processed during the data analysis process.

21. (Currently Amended) The method of claim 14 further comprising receiving [[an]] user input identifying a computing device or a component of a computing device to be used during the execution of one of the multiple sub-processes.

22. (Currently Amended) The method of claim 14 further comprising receiving [[an]] user input identifying an order in which the multiple sub-processes are to be performed when performing the data analysis process.

23. (Currently Amended) The method of claim 14 further comprising receiving [[an]] user input identifying when the data analysis process is to be initiated.

24. (Currently Amended) The method of claim 14 wherein the ~~at least one of the identified sub-processes is a~~ deployment sub-process comprises a first deployment sub-process for storing a data attribute created in another of the identified sub-processes in a first data store and the multiple identified sub-processes further include a second deployment sub-process for storing the data attribute in a second data store.

25. (Original) The method of claim 24 wherein the first data store is the same as the second data store.

26. (Original) The method of claim 24 wherein the first data store is different from the second data store.

27. (Original) The method of claim 26 wherein the first data store comprises a transactional data store and the second data store comprises an analytical data store.

28. (Currently Amended) A computer program product tangibly embodied in a storage medium ~~an information carrier~~, the computer program product including instructions that, when executed, receive information from a user for use in a data analysis process, and the computer program product being configured to

receive ~~[[an]]~~ user input identifying a data analysis process;

receive multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process, wherein:

at least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical processing data source that is used for analytical

processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and

at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes; and

store the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process, wherein

the deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing.

29-30. (Cancelled)

31. (Currently Amended) The computer program product of claim 28 wherein one of the sub-process inputs comprises a sub-process user input identifying a computer program that causes the identified sub-process to be performed.

32. (Currently Amended) The computer program product of claim 28 further configured to receive user inputs of meta-data elements to be used in the data analysis process wherein each meta-data element is associated with 1) a corresponding data element in the first transactional data source, 2) a corresponding data element in the analytical process processing data source, or 3) both a corresponding data element in one of the first and second transactional data sources and a corresponding data element in the analytical process data source.

33. (Currently Amended) The computer program product of claim 28 wherein the ~~at least one of the identified sub-processes is a deployment sub-process~~ comprises a first deployment sub-process for storing a data attribute created in another of the identified sub-processes in a first data store and the multiple identified sub-processes further include a second deployment sub-process for storing the data attribute in a second data store.



34. (Currently Amended) A system for receiving information from a user for use in a data analysis the system comprising a processor connected to a storage device and one or more input/output devices, wherein the processor is configured to:

receive [[an]] user input identifying a data analysis process;

receive multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process, wherein:

at least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical processing data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and

at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes; and

store the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process, wherein

the deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing.